

## **ABSTRACT**

A controller for controlling the pump unit of an oil well includes a sensor having a first and second probe for placement in the flow of oil from the well bore. Each of the probes contains a heater. A constant power source is selectively connected to one of the heaters. Each of the probes also include a linear RTD at each of their tips respectively for generating a signal indicative of the temperature measured at each of the first and second probes. A control unit receives signals from the RTD's and determines a flow rate therefrom. A pump control signal is generated in response to the flow rate, wherein pump control signal continuously varies a predetermined parameter of a pumping unit during operation of the pumping unit.

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